



SEQUENCE LISTING

#5

<110> Crooke, Stanley T.
Lima, Walter
Wu, Hongjiang

<120> Methods of Using Mammalian RNase H and Compositions Thereof

<130> ISPH-0520

<140> US/09/781,712

<141> 2001-02-12

<150> US 09/684,254

<151> 2000-10-06

<150> US 09/343,809

<151> 1999-06-30

<150> US 09/203,716

<151> 1998-12-02

<150> US 60/067,458

<151> 1997-12-04

<160> 39

<170> PatentIn version 3.0

<210> 1

<211> 299

<212> PRT

<213> Homo sapiens

<400> 1

Met Asp Leu Ser Glu Leu Glu Arg Asp Asn Thr Gly Arg Cys Arg Leu
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Ser Ser Pro Val Pro Ala Val Cys Arg Lys Glu Pro Cys Val Leu Gly
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Val Asp Glu Ala Gly Arg Gly Pro Val Leu Gly Pro Met Val Tyr Ala
35 40 45

Ile Cys Tyr Cys Pro Leu Pro Arg Leu Ala Asp Leu Glu Ala Leu Lys
50 55 60

Val Ala Asp Ser Lys Thr Leu Leu Glu Ser Glu Arg Glu Arg Leu Phe
 65 70 75 80
 Ala Lys Met Glu Asp Thr Asp Phe Val Gly Trp Ala Leu Asp Val Leu
 85 90 95
 Ser Pro Asn Leu Ile Ser Thr Ser Met Leu Gly Trp Val Lys Tyr Asn
 100 105 110
 Leu Asn Ser Leu Ser His Asp Thr Ala Thr Gly Leu Ile Gln Tyr Ala
 115 120 125
 Leu Asp Gln Gly Val Asn Val Thr Gln Val Phe Val Asp Thr Val Gly
 130 135 140
 Met Pro Glu Thr Tyr Gln Ala Arg Leu Gln Gln Ser Phe Pro Gly Ile
 145 150 155 160
 Glu Val Thr Val Lys Ala Lys Ala Asp Ala Leu Tyr Pro Val Val Ser
 165 170 175
 Ala Ala Ser Ile Cys Ala Lys Val Ala Arg Asp Gln Ala Val Lys Lys
 180 185 190
 Trp Gln Phe Val Glu Lys Leu Gln Asp Leu Asp Thr Asp Tyr Gly Ser
 195 200 205
 Gly Tyr Pro Asn Asp Pro Lys Thr Lys Ala Trp Leu Lys Glu His Val
 210 215 220
 Glu Pro Val Phe Gly Phe Pro Gln Phe Val Arg Phe Ser Trp Arg Thr
 225 230 235 240
 Ala Gln Thr Ile Leu Glu Lys Glu Ala Glu Asp Val Ile Trp Glu Asp
 245 250 255
 Ser Ala Ser Glu Asn Gln Glu Gly Leu Arg Lys Ile Thr Ser Tyr Phe
 260 265 270
 Leu Asn Glu Gly Ser Gln Ala Arg Pro Arg Ser Ser His Arg Tyr Phe
 275 280 285
 Leu Glu Arg Gly Leu Glu Ser Ala Thr Ser Leu
 290 295

<210> 2

<211> 128

<212> PRT

<213> Mus sp.

<400> 2

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 Ser Ser Pro Val Pro Ala Val Cys Leu Lys Glu Pro Cys Val Leu Gly

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Val	Asp	Glu	Ala	Gly	Arg	Gly	Pro	Val	Leu	Gly	Pro	Met	Val	Tyr	Ala
	35						40					45			
Ile	Cys	Tyr	Cys	Pro	Leu	Ser	Arg	Leu	Ala	Asp	Leu	Glu	Ala	Leu	Lys
	50					55					60				
Val	Ala	Asp	Ser	Lys	Thr	Leu	Thr	Glu	Asn	Glu	Arg	Glu	Arg	Leu	Phe
65					70					75					80
Ala	Lys	Met	Glu	Glu	Asp	Gly	Asp	Phe	Val	Gly	Trp	Ala	Leu	Asp	Val
				85					90					95	
Leu	Ser	Pro	Asn	Leu	Ile	Ser	Thr	Ser	Met	Leu	Gly	Arg	Val	Lys	Tyr
			100					105					110		
Asn	Leu	Asn	Ser	Leu	Ser	His	Asp	Thr	Ala	Ala	Gly	Leu	Ile	Gln	Tyr
		115					120					125			

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<211> 307

<212> PRT

<213> Caenorhabditis elegans

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Thr	Glu	Arg	Ser	Lys	Thr	Trp	Asn	Asn	Phe	Gly	Asn	Gly	Ile	Pro	Cys
			20					25					30		
Val	Leu	Gly	Ile	Asp	Glu	Ala	Gly	Arg	Gly	Pro	Val	Leu	Gly	Pro	Met
		35					40					45			
Val	Tyr	Ala	Ala	Ala	Ile	Ser	Pro	Leu	Asp	Gln	Asn	Val	Glu	Leu	Lys
	50					55					60				
Asn	Leu	Gly	Val	Asp	Asp	Ser	Lys	Ala	Leu	Asn	Glu	Ala	Lys	Arg	Glu
65				70						75					80
Glu	Ile	Phe	Asn	Lys	Met	Asn	Glu	Asp	Glu	Asp	Ile	Gln	Gln	Ile	Ile
			85						90					95	
Ala	Tyr	Ala	Leu	Arg	Cys	Leu	Ser	Pro	Glu	Leu	Ile	Ser	Cys	Ser	Met
			100					105					110		
Leu	Lys	Arg	Gln	Lys	Tyr	Ser	Leu	Asn	Glu	Val	Ser	His	Glu	Ala	Ala
		115					120					125			
Ile	Thr	Leu	Ile	Arg	Asp	Ala	Leu	Ala	Cys	Asn	Val	Asn	Val	Val	Glu
	130					135					140				
Ile	Lys	Val	Asp	Thr	Val	Gly	Pro	Lys	Ala	Thr	Tyr	Gln	Ala	Lys	Leu
145					150					155					160

Glu Lys Leu Phe Pro Gly Ile Ser Ile Cys Val Thr Glu Lys Ala Asp
 165 170 175
 Ser Leu Phe Pro Ile Val Ser Ala Ala Ser Ile Ala Ala Lys Val Thr
 180 185 190
 Arg Asp Ser Arg Leu Arg Asn Trp Gln Phe Arg Glu Lys Asn Ile Lys
 195 200 205
 Val Pro Asp Ala Gly Tyr Gly Ser Gly Tyr Pro Gly Asp Pro Asn Thr
 210 215 220
 Lys Lys Phe Leu Gln Leu Ser Val Glu Pro Val Phe Gly Phe Cys Ser
 225 230 235 240
 Leu Val Arg Ser Ser Trp Lys Thr Ala Ser Thr Ile Val Glu Lys Arg
 245 250 255
 Cys Val Pro Gly Ser Trp Glu Asp Asp Glu Glu Glu Gly Lys Ser Gln
 260 265 270
 Ser Lys Arg Met Thr Ser Trp Met Val Pro Lys Asn Glu Thr Glu Val
 275 280 285
 Val Pro Lys Arg Asn Met Glu Ile Asn Leu Thr Lys Ile Val Ser Thr
 290 295 300

Leu Phe Leu
 305

<210> 4

<211> 307

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 4

Met Val Pro Pro Thr Val Glu Ala Ser Leu Glu Ser Pro Tyr Thr Lys
 1 5 10 15
 Ser Tyr Phe Ser Pro Val Pro Ser Ala Leu Leu Glu Gln Asn Asp Ser
 20 25 30
 Pro Ile Ile Met Gly Ile Asp Glu Ala Gly Arg Gly Pro Val Leu Gly
 35 40 45
 Pro Met Val Tyr Ala Val Ala Tyr Ser Thr Gln Lys Tyr Gln Asp Glu
 50 55 60
 Thr Ile Ile Pro Asn Tyr Glu Phe Asp Asp Ser Lys Lys Leu Thr Asp
 65 70 75 80
 Pro Ile Arg Arg Met Leu Phe Ser Lys Ile Tyr Gln Asp Asn Glu Glu
 85 90 95
 Leu Thr Gln Ile Gly Tyr Ala Thr Thr Cys Ile Thr Pro Leu Asp Ile

100					105					110					
Ser	Arg	Gly	Met	Ser	Lys	Phe	Pro	Pro	Thr	Arg	Asn	Tyr	Asn	Leu	Asn
		115					120					125			
Glu	Gln	Ala	His	Asp	Val	Thr	Met	Ala	Leu	Ile	Asp	Gly	Val	Ile	Lys
	130					135					140				
Gln	Asn	Val	Lys	Leu	Ser	His	Val	Tyr	Val	Asp	Thr	Val	Gly	Pro	Pro
145					150					155					160
Ala	Ser	Tyr	Gln	Lys	Lys	Leu	Glu	Gln	Arg	Phe	Pro	Gly	Val	Lys	Phe
				165					170					175	
Thr	Val	Ala	Lys	Lys	Ala	Asp	Ser	Leu	Tyr	Cys	Met	Val	Ser	Val	Ala
			180					185					190		
Ser	Val	Val	Ala	Lys	Val	Thr	Arg	Asp	Ile	Leu	Val	Glu	Ser	Leu	Lys
		195					200					205			
Arg	Asp	Pro	Asp	Glu	Ile	Leu	Gly	Ser	Gly	Tyr	Pro	Ser	Asp	Pro	Lys
	210					215					220				
Thr	Val	Ala	Trp	Leu	Lys	Arg	Asn	Gln	Thr	Ser	Leu	Met	Gly	Trp	Pro
225					230					235					240
Ala	Asn	Met	Val	Arg	Phe	Ser	Trp	Gln	Thr	Cys	Gln	Thr	Leu	Leu	Asp
				245					250					255	
Asp	Ala	Ser	Lys	Asn	Ser	Ile	Pro	Ile	Lys	Trp	Glu	Glu	Gln	Tyr	Met
			260					265					270		
Asp	Ser	Arg	Lys	Asn	Ala	Ala	Gln	Lys	Thr	Lys	Gln	Leu	Gln	Leu	Gln
		275					280					285			
Met	Val	Ala	Lys	Pro	Val	Arg	Arg	Lys	Arg	Leu	Arg	Thr	Leu	Asp	Asn
	290					295					300				

Trp Tyr Arg
305

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<213> Escherichia coli

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Glu	Val	Gly	Arg	Gly	Pro	Leu	Val	Gly	Ala	Val	Val	Thr	Ala	Ala	Val
		20						25					30		
Ile	Leu	Asp	Pro	Ala	Arg	Pro	Ile	Ala	Gly	Leu	Asn	Asp	Ser	Lys	Lys
		35					40					45			

Leu Ser Glu Lys Arg Arg Leu Ala Leu Tyr Glu Glu Ile Lys Glu Lys
 50 55 60
 Ala Leu Ser Trp Ser Leu Gly Arg Ala Glu Pro His Glu Ile Asp Glu
 65 70 75 80
 Leu Asn Ile Leu His Ala Thr Met Leu Ala Met Gln Arg Ala Val Ala
 85 90 95
 Gly Leu His Ile Ala Pro Glu Tyr Val Leu Ile Asp Gly Asn Arg Cys
 100 105 110
 Pro Lys Leu Pro Met Pro Ala Met Ala Val Val Lys Gly Asp Ser Arg
 115 120 125
 Val Pro Glu Ile Ser Ala Ala Ser Ile Leu Ala Lys Val Thr Arg Asp
 130 135 140
 Ala Glu Met Ala Ala Leu Asp Ile Val Phe Pro Gln Tyr Gly Phe Ala
 145 150 155 160
 Gln His Lys Gly Tyr Pro Thr Ala Phe His Leu Glu Lys Leu Ala Glu
 165 170 175
 His Gly Ala Thr Glu His His Arg Arg Ser Phe Gly Pro Val Lys Arg
 180 185 190
 Ala Leu Gly Leu Ala Ser
 195

<210> 6

<211> 286

<212> PRT

<213> Homo sapiens

<300>

<302> Human Type 2 RNase H

<309>

<310> US/09/203,726

<311> 1998-12-02

<312> 1999-12-14

<400> 6

Met Ser Trp Leu Leu Phe Leu Ala His Arg Val Ala Leu Ala Ala Leu
 1 5 10 15
 Pro Cys Arg Arg Gly Ser Arg Gly Phe Gly Met Phe Tyr Ala Val Arg
 20 25 30

Arg	Gly	Arg	Lys	Thr	Gly	Val	Phe	Leu	Thr	Trp	Asn	Glu	Cys	Arg	Ala		
		35					40					45					
Gln	Val	Asp	Arg	Phe	Pro	Ala	Ala	Arg	Phe	Lys	Lys	Phe	Ala	Thr	Glu		
	50					55					60						
Asp	Glu	Ala	Trp	Ala	Phe	Val	Arg	Lys	Ser	Ala	Ser	Pro	Glu	Val	Ser		
65					70				75						80		
Glu	Gly	His	Glu	Asn	Gln	His	Gly	Gln	Glu	Ser	Glu	Ala	Lys	Pro	Gly		
				85					90					95			
Lys	Arg	Leu	Arg	Glu	Pro	Leu	Asp	Gly	Asp	Gly	His	Glu	Ser	Ala	Gln		
			100					105					110				
Pro	Tyr	Ala	Lys	His	Met	Lys	Pro	Ser	Val	Glu	Pro	Ala	Pro	Pro	Val		
		115					120					125					
Ser	Arg	Asp	Thr	Phe	Ser	Tyr	Met	Gly	Asp	Phe	Val	Val	Val	Tyr	Thr		
	130					135					140						
Asp	Gly	Cys	Cys	Ser	Ser	Asn	Gly	Arg	Arg	Lys	Pro	Arg	Ala	Gly	Ile		
145					150					155					160		
Gly	Val	Tyr	Trp	Gly	Pro	Gly	His	Pro	Leu	Asn	Val	Gly	Ile	Arg	Leu		
				165					170					175			
Pro	Gly	Arg	Gln	Thr	Asn	Gln	Arg	Ala	Glu	Ile	His	Ala	Ala	Cys	Lys		
			180					185					190				
Ala	Ile	Glu	Gln	Ala	Lys	Thr	Gln	Asn	Ile	Asn	Lys	Leu	Val	Leu	Tyr		
		195					200					205					
Thr	Asp	Ser	Met	Phe	Thr	Ile	Asn	Gly	Ile	Thr	Asn	Trp	Val	Gln	Gly		
	210					215					220						
Trp	Lys	Lys	Asn	Gly	Trp	Lys	Thr	Ser	Ala	Gly	Lys	Glu	Val	Ile	Asn		
225					230					235					240		
Lys	Glu	Asp	Phe	Val	Ala	Leu	Glu	Arg	Leu	Thr	Gln	Gly	Met	Asp	Ile		
			245						250					255			
Gln	Trp	Met	His	Val	Pro	Gly	His	Ser	Gly	Phe	Ile	Gly	Asn	Glu	Glu		
			260					265					270				
Ala	Asp	Arg	Leu	Ala	Arg	Glu	Gly	Ala	Lys	Gln	Ser	Glu	Asp				
		275					280					285					

<210> 7

<211> 286

<212> PRT

<213> Homo sapiens

<300>

<301> Wu et al.

<302> Molecular Cloning and Expression of cDNA for Human RNase H
 <303> Antisense Nucleic Acid Drug Design
 <304> 8
 <305> 1
 <306> 53-61
 <307> 1998-02-08
 <308> AF039652
 <309> 1998-04-02

<400> 7

Met	Ser	Trp	Leu	Leu	Phe	Leu	Ala	His	Arg	Val	Ala	Leu	Ala	Ala	Leu
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Pro	Cys	Arg	Arg	Gly	Ser	Arg	Gly	Phe	Gly	Met	Phe	Tyr	Ala	Val	Arg
			20					25					30		
Arg	Gly	Arg	Lys	Thr	Gly	Val	Phe	Leu	Thr	Trp	Asn	Glu	Cys	Arg	Ala
			35				40					45			
Gln	Val	Asp	Arg	Phe	Pro	Ala	Ala	Arg	Phe	Lys	Lys	Phe	Ala	Thr	Glu
	50					55					60				
Asp	Glu	Ala	Trp	Ala	Phe	Val	Arg	Lys	Ser	Ala	Ser	Pro	Glu	Val	Ser
65					70					75					80
Glu	Gly	His	Glu	Asn	Gln	His	Gly	Gln	Glu	Ser	Glu	Ala	Lys	Ala	Ser
				85				90						95	
Lys	Arg	Leu	Arg	Glu	Pro	Leu	Asp	Gly	Asp	Gly	His	Glu	Ser	Ala	Glu
			100					105					110		
Pro	Tyr	Ala	Lys	His	Met	Lys	Pro	Ser	Val	Glu	Pro	Ala	Pro	Pro	Val
		115					120					125			
Ser	Arg	Asp	Thr	Phe	Ser	Tyr	Met	Gly	Asp	Phe	Val	Val	Val	Tyr	Thr
		130				135					140				
Asp	Gly	Cys	Cys	Ser	Ser	Asn	Gly	Arg	Arg	Arg	Pro	Arg	Ala	Gly	Ile
145					150					155					160
Gly	Val	Tyr	Trp	Gly	Pro	Gly	His	Pro	Leu	Asn	Val	Gly	Ile	Arg	Leu
				165				170						175	
Pro	Gly	Arg	Gln	Thr	Asn	Gln	Arg	Ala	Glu	Ile	His	Ala	Ala	Cys	Lys
			180					185					190		
Ala	Ile	Glu	Gln	Ala	Lys	Thr	Gln	Asn	Ile	Asn	Lys	Leu	Val	Leu	Tyr
		195					200					205			
Thr	Asp	Ser	Met	Phe	Thr	Ile	Asn	Gly	Ile	Thr	Asn	Trp	Val	Gln	Gly
		210				215					220				

Trp Lys Lys Asn Gly Trp Lys Thr Ser Ala Gly Lys Glu Val Ile Asn
225 230 235 240

Lys Glu Asp Phe Val Ala Leu Glu Arg Leu Thr Gln Gly Met Asp Ile
245 250 255

Gln Trp Met His Val Pro Gly His Ser Gly Phe Ile Gly Asn Glu Glu
260 265 270

Ala Asp Arg Leu Ala Arg Glu Gly Ala Lys Gln Ser Glu Asp
275 280 285

<210> 8

<211> 286

<212> PRT

<213> Homo sapiens

<300>

<301> Cerritelli and Crouch

<302> Cloning, Expression and Mapping of Ribonucleases H of Human and Mouse
Related to Bacterial RNase HI

<303> Genomics

<304> 53

<305> 3

<306> 300-307

<307> 1998-11-01

<400> 8

Met Ser Trp Phe Leu Phe Leu Ala His Arg Val Ala Leu Ala Ala Leu
1 5 10 15

Pro Cys Arg Arg Gly Ser Arg Gly Phe Gly Met Phe Tyr Ala Val Arg
20 25 30

Arg Gly Arg Lys Thr Gly Val Phe Leu Thr Trp Asn Glu Cys Arg Ala
35 40 45

Gln Val Asp Arg Phe Pro Ala Ala Arg Phe Lys Lys Phe Ala Thr Glu
50 55 60

Asp Glu Ala Trp Ala Phe Val Arg Lys Ser Ala Ser Pro Glu Val Ser
65 70 75 80

Glu Gly His Glu Asn Gln His Gly Gln Glu Ser Glu Ala Lys Ala Ser
85 90 95

Lys Arg Leu Arg Glu Pro Leu Asp Gly Asp Gly His Glu Ser Ala Glu
100 105 110

Pro	Tyr	Ala	Lys	His	Met	Lys	Pro	Ser	Val	Glu	Pro	Ala	Pro	Pro	Val
		115					120					125			
Ser	Arg	Asp	Thr	Phe	Ser	Tyr	Met	Gly	Asp	Phe	Val	Val	Val	Tyr	Thr
	130					135					140				
Asp	Gly	Cys	Cys	Ser	Ser	Asn	Gly	Arg	Arg	Arg	Pro	Arg	Ala	Gly	Ile
145					150					155					160
Gly	Val	Tyr	Trp	Gly	Pro	Gly	His	Pro	Leu	Asn	Val	Gly	Ile	Arg	Leu
				165					170					175	
Pro	Gly	Arg	Gln	Thr	Asn	Gln	Arg	Ala	Glu	Ile	His	Ala	Ala	Cys	Lys
			180					185					190		
Ala	Ile	Glu	Gln	Ala	Lys	Thr	Gln	Asn	Ile	Asn	Lys	Leu	Val	Leu	Tyr
		195					200					205			
Thr	Asp	Ser	Met	Phe	Thr	Ile	Asn	Gly	Ile	Thr	Asn	Trp	Val	Gln	Gly
	210					215					220				
Trp	Lys	Lys	Asn	Gly	Trp	Lys	Thr	Ser	Ala	Gly	Lys	Glu	Val	Ile	Asn
225					230					235					240
Lys	Glu	Asp	Phe	Val	Ala	Leu	Glu	Arg	Leu	Thr	Gln	Gly	Met	Asp	Ile
			245						250					255	
Gln	Trp	Met	His	Val	Pro	Gly	His	Ser	Gly	Phe	Ile	Gly	Asn	Glu	Glu
			260					265					270		
Ala	Asp	Arg	Leu	Ala	Arg	Glu	Gly	Ala	Lys	Gln	Ser	Glu	Asp		
		275					280					285			

<210> 9

<211> 286

<212> PRT

<213> Homo sapiens

<300>

<301> Frank, Braunshofer-Reiter, Poltl and Holzmann

<302> Cloning, Subcellular Localization and Functional Expression of Human RNase HII

<303> Biol. Chem.

<304> 379

<305> 99

<306> 1407-1412

<307> 1998-12-01

<400> 9

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Pro Cys Arg Arg Gly Ser Arg Gly Phe Gly Met Phe Tyr Ala Val Arg
20 25 30
Arg Gly Arg Lys Thr Gly Val Phe Leu Thr Trp Asn Glu Cys Arg Ala
35 40 45
Gln Val Asp Arg Phe Pro Ala Arg Phe Lys Lys Phe Ala Thr Glu
50 55 60
Asp Glu Ala Trp Ala Phe Val Arg Lys Ser Ala Ser Pro Glu Val Ser
65 70 75 80
Glu Gly His Glu Asn Gln His Gly Arg Glu Ser Glu Ala Lys Ala Ser
85 90 95
Lys Arg Leu Arg Glu Pro Leu Asp Gly Asp Gly His Glu Ser Ala Glu
100 105 110
Pro Tyr Ala Lys His Met Lys Pro Ser Val Glu Pro Ala Pro Pro Val
115 120 125
Ser Arg Asp Thr Phe Ser Tyr Met Gly Asp Phe Val Val Val Tyr Thr
130 135 140
Asp Gly Cys Cys Ser Ser Asn Gly Arg Arg Arg Pro Arg Ala Gly Ile
145 150 155 160
Gly Val Tyr Trp Gly Pro Gly His Pro Leu Asn Val Gly Ile Arg Leu
165 170 175
Pro Gly Arg Gln Thr Asn Gln Arg Ala Glu Ile His Ala Ala Cys Lys
180 185 190
Ala Ile Glu Gln Ala Lys Thr Gln Asn Ile Asn Lys Leu Val Leu Tyr
195 200 205
Thr Asp Ser Met Phe Thr Ile Asn Gly Ile Thr Asn Trp Val Arg Gly
210 215 220
Trp Lys Lys Asn Gly Trp Lys Thr Ser Ala Gly Lys Glu Val Ile Asn
225 230 235 240
Lys Glu Asp Phe Val Ala Leu Glu Arg Leu Thr Gln Gly Met Asp Ile
245 250 255
Gln Trp Met His Val Pro Gly His Ser Gly Phe Ile Gly Asn Glu Glu
260 265 270
Ala Asp Arg Leu Ala Arg Glu Gly Ala Lys Gln Ser Glu Asp
275 280 285

<210> 10

<211> 299

<212> PRT

<213> Homo sapiens

<300>

<301> Frank, Braunshofer-Reiter, Wintersberger, Grimm and Busen

<302> Cloning of the cDNA encoding the large subunit of human RNase HI, a homologue of the prokaryotic RNase HII

<303> Proc. Natl. Acad. Sci. USA

<304> 95

<305> 22

<306> 12872-12877

<307> 1998-10-27

<400> 10

Met Asp Leu Ser Glu Leu Glu Arg Asp Asn Thr Gly Arg Cys Arg Leu
1 5 10 15

Ser Ser Pro Val Pro Ala Val Cys Arg Lys Glu Pro Cys Val Leu Gly
20 25 30

Val Asp Glu Ala Gly Arg Gly Pro Val Leu Gly Pro Met Val Tyr Ala
35 40 45

Ile Cys Tyr Cys Pro Leu Pro Arg Leu Ala Asp Leu Glu Ala Leu Lys
50 55 60

Val Ala Asp Ser Lys Thr Leu Leu Glu Ser Glu Arg Glu Arg Leu Phe
65 70 75 80

Ala Lys Met Glu Asp Thr Asp Phe Val Gly Trp Ala Leu Asp Val Leu
85 90 95

Ser Pro Asn Leu Ile Ser Thr Ser Met Leu Gly Arg Val Lys Tyr Asn
100 105 110

Leu Asn Ser Leu Ser His Asp Thr Ala Thr Gly Leu Ile Gln Tyr Ala
115 120 125

Leu Asp Gln Gly Val Asn Val Thr Gln Val Phe Val Asp Thr Val Gly
130 135 140

Met Pro Glu Thr Tyr Gln Ala Gln Leu Gln Gln Ser Phe Pro Gly Ile
145 150 155 160

Glu Val Thr Val Lys Ala Lys Ala Asp Ala Leu Tyr Pro Val Val Ser
165 170 175

Ala Ala Ser Ile Cys Ala Lys Val Ala Arg Asp Gln Ala Val Lys Lys
180 185 190

Trp Gln Phe Val Glu Lys Leu Gln Asp Leu Asp Thr Asp Tyr Gly Ser

195					200					205					
Gly	Tyr	Pro	Asn	Asp	Pro	Lys	Thr	Lys	Ala	Trp	Leu	Lys	Glu	His	Val
210						215					220				
Glu	Pro	Val	Phe	Gly	Phe	Pro	Gln	Phe	Val	Arg	Phe	Ser	Trp	Arg	Thr
225					230					235					240
Ala	Gln	Thr	Ile	Leu	Glu	Lys	Glu	Ala	Glu	Asp	Val	Ile	Trp	Glu	Asp
				245					250					255	
Ser	Ala	Ser	Glu	Asn	Gln	Glu	Gly	Leu	Arg	Lys	Ile	Thr	Ser	Tyr	Phe
			260					265					270		
Leu	Asn	Glu	Gly	Ser	Gln	Ala	Arg	Pro	Arg	Ser	Ser	His	Arg	Tyr	Phe
		275					280					285			
Leu	Glu	Arg	Gly	Leu	Glu	Ser	Ala	Thr	Ser	Leu					
	290					295									

<210> 11

<211> 285

<212> PRT

<213> Mus sp.

<300>

<301> Cerritelli and Crouch

<302> Cloning, Expression and Mapping of Ribonucleases H of Human and Mouse Related to Bacterial RNase HI

<303> Genomics

<304> 53

<305> 3

<306> 300-307

<307> 1998-11-01

<400> 11

Met	Arg	Trp	Leu	Leu	Pro	Leu	Ser	Arg	Thr	Val	Thr	Leu	Ala	Val	Val
1				5					10					15	
Arg	Leu	Arg	Arg	Gly	Ile	Cys	Gly	Leu	Gly	Met	Phe	Tyr	Ala	Val	Arg
			20					25					30		
Arg	Gly	Arg	Arg	Thr	Gly	Val	Phe	Leu	Ser	Trp	Ser	Glu	Cys	Lys	Ala
			35				40					45			
Gln	Val	Asp	Arg	Phe	Pro	Ala	Ala	Arg	Phe	Lys	Lys	Phe	Ala	Thr	Glu

50	55	60
Asp Glu Ala Trp Ala Phe Val Arg Ser Ser Ser Ser Pro Asp Gly Ser 65 70 75 80		
Lys Gly Gln Glu Ser Ala His Glu Gln Lys Ser Gln Ala Lys Thr Ser 85 90 95		
Lys Arg Pro Arg Glu Pro Leu Gly Glu Gly Glu Glu Leu Pro Glu Pro 100 105 110		
Gly Pro Lys His Thr Arg Gln Asp Thr Glu Pro Ala Ala Val Val Ser 115 120 125		
Lys Asp Thr Phe Ser Tyr Met Gly Glu Ser Val Ile Val Tyr Thr Asp 130 135 140		
Gly Cys Cys Ser Ser Asn Gly Arg Lys Arg Ala Arg Ala Gly Ile Gly 145 150 155 160		
Val Tyr Trp Gly Pro Gly His Pro Leu Asn Val Gly Ile Arg Leu Pro 165 170 175		
Gly Arg Gln Thr Asn Gln Arg Ala Glu Ile His Ala Ala Cys Lys Ala 180 185 190		
Ile Met Gln Ala Lys Ala Gln Asn Ile Ser Lys Leu Val Leu Tyr Thr 195 200 205		
Asp Ser Met Phe Thr Ile Asn Gly Ile Thr Asn Trp Val Gln Gly Trp 210 215 220		
Lys Lys Asn Gly Trp Arg Thr Ser Thr Gly Lys Asp Val Ile Asn Lys 225 230 235 240		
Glu Asp Phe Met Glu Leu Asp Glu Leu Thr Gln Gly Met Asp Ile Gln 245 250 255		
Trp Met His Ile Pro Gly His Ser Gly Phe Val Gly Asn Glu Glu Ala 260 265 270		
Asp Arg Leu Ala Arg Glu Gly Ala Lys Gln Ser Glu Asp 275 280 285		

<210> 12

<211> 1131

<212> DNA

<213> Homo sapiens

<400> 12

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